

What is claimed is:

1. A liquid electrophotographic image-forming apparatus comprising:
a transfer belt for transferring the image formed on the developing device onto
5 a printing medium;

a cleaning blade for cleaning the remaining developer from the transfer belt;
and

10 an anti-wraparound device for preventing the developer removed by the
cleaning blade from flowing toward both sides of the cleaning blade, wherein the
anti-wraparound device comprises:

a bushing formed on both ends of a rotary shaft of a transfer backup
roller to slide along the rotary shaft in an axial direction of the rotary shaft;

15 a shielding member, which is installed on the bushing and contacts the
transfer belt and the cleaning blade to prevent the developer from flowing
toward sides of the transfer belt; and

an elastic member installed on both ends of the transfer backup roller
to surround the rotary shaft for elastically biasing the bushing toward the
transfer belt.

20 2. The apparatus of claim 1, further comprising:

a stopper fixing the bushing by being coupled to the bushing; and

15 a bushing fix member, one side of which is fixed by a bracket and the other
side of which includes a supporting portion for fixing the stopper.

25 3. The apparatus of claim 2, wherein the stopper includes a plurality of
protrusions with predetermined intervals therebetween, and the bushing includes
concave portions in which the protrusions are inserted.

30 4. The apparatus of claim 2, wherein the supporting portion includes a
supporting recess in which the stopper can be inserted and fixed therein.

5. The apparatus of claim 1, wherein the bushing includes a guide
projection for guiding the stable rotation of the transfer belt by contacting a guide

strip which is protrusively formed along both sides of an inner surface of the transfer belt.

6. The apparatus of claim 1, wherein the shielding member is made of a
5 material softer than that of the transfer belt.

7. The apparatus of claim 1, wherein the shielding member is made of a sponge material.

10 8. The apparatus of claim 1, wherein the shielding member is made of a rubber material.

15 9. The apparatus of claim 1, wherein the shielding member is formed having a diameter greater than a diameter of the transfer backup roller including a transfer belt thickness, and wherein the shielding member directs the developer removed by the cleaning blade away from the sides of the cleaning blade and the sides of the transfer belt.

20 10. The apparatus of claim 1, wherein the cleaning blade is formed to be wider than the transfer belt.

25 11. The apparatus of claim 1, wherein the shielding member is formed having a diameter substantially equal to a diameter of the transfer backup roller including a transfer belt thickness, and wherein the shielding member directs the developer removed by the cleaning blade away from the sides of the transfer belt.

12. An anti-wraparound device for preventing developer contamination, comprising:

30 a bushing formed on both ends of a rotary shaft of a transfer backup roller to slide along the rotary shaft in an axial direction;

a shielding member installed on the bushing and contacting a transfer belt and a cleaning blade to prevent developer from flowing toward the sides of the transfer belt; and

an elastic member installed on both ends of the transfer backup roller to surround the rotary shaft for elastically biasing the bushing toward the transfer belt.

13. The device of claim 12, wherein the shielding member is formed having
5 a diameter greater than a diameter of the transfer backup roller including a transfer belt thickness for directing the developer removed by the cleaning blade away from at least one surface of the transfer belt and the cleaning blade.

14. The device of claim 12, wherein the shielding member is formed having
10 a diameter substantially equal to a diameter of the transfer backup roller including a transfer belt thickness for directing the developer removed by the cleaning blade away from at least one surface of the transfer belt.

15. The device of claim 12, further comprising:
15 a stopper fixing the bushing by being coupled to the bushing; and
a bushing fix member, one side of which is fixed by a bracket and the other side of which includes a supporting portion for fixing the stopper.

16. The device of claim 15, wherein the stopper includes a plurality of
20 protrusions with predetermined intervals therebetween, and the bushing includes concave portions in which the protrusions are inserted.

17. The device of claim 15, wherein the supporting portion includes a supporting recess in which the stopper can be inserted and fixed therein.
25

18. The device of claim 12, wherein the bushing includes a guide projection for guiding the stable rotation of the transfer belt by contacting a guide strip which is protrusively formed along both sides of an inner surface of the transfer belt.
30

19. The device of claim 12, wherein the shielding member is made of a material softer than that of the transfer belt.

20. The device of claim 12, wherein the shielding member is made of a sponge material.

21. The device of claim 12, wherein the shielding member is made of a
5 rubber material.